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EXAMINER

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| ART UNIT | PAPER NUMBER |
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2153

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5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,441

Applicant(s)

BATTILANA, MICHAEL C.

Examiner

Londra C Burge

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: original application filed 09/28/2000 and IDS filed 05/07/2001.
2. Claims 1-100 are pending, Claims 1, 45 and 91 are independent claims.

Claim Rejections - 35 USC § 112

3. **Claim 95 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

In regard to dependent claim 95, claim 95 depends on itself which renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

Claim Rejections - 35 USC § 102

4. **The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. **Claims 1-12, 28-29, 43-57, 73-74, and 88-90 are rejected under 35 U.S.C. 102(a) as being anticipated by Sugimoto US Patent No. 5,847,697 filed 6/31/1995 issued 12/8/1998 (Provided by applicant in IDS).**

In regard to independent claim 1, Sugimoto discloses a perspective view of the dedicated single-hand keyboard corrected as an input device to a personal computer (Sugimoto Figure 25). A user enters an input character string comprising the characters (Sugimoto Page 26 Lines 20-21). Detect duplicate entries (Sugimoto Page 37 Line 22). Enables the user to use the CTVi key to change characters from a primary to a secondary character assigned to a multiple-character key that is being entered (Sugimoto Page 41 Line 10-12), compare with claim 1, *"...means for receiving input text; means for detecting an activator event in the input text; and means for modifying a word in the input text in response to said detecting means detecting an activator event."*)

In regard to dependent claim 2, Sugimoto discloses a character generator for a keyboard where the keyboard has keys for entry of characters. (Sugimoto Abstract Line 1; compare with claim 2, *"...means for receiving input text including a keyboard."*)

In regard to dependent claim 3, Sugimoto discloses A keyboard for resolving ambiguities in words entered in the keyboard that the word corresponds to a predetermined mnemonic character string of at least two characters (Sugimoto Claim 32 Line 1 and Line 22; compare with claim 3, *"...the activator event includes actuation of a predetermined key of said keyboard."*)

In regard to dependent claim 4, Sugimoto discloses of keyboard that includes an apostrophe which can used. (Sugimoto Figure 7 Compare with claim 4, *"...wherein the activator event includes actuation of an apostrophe key of said keyboard."*)

In regard to dependent claim 5, Sugimoto discloses A keyboard for resolving ambiguities in words entered in the keyboard that the word corresponds to a predetermined

Art Unit: 2178

mnemonic character string of at least two characters and it is understood that another can be actuated after (Sugimoto Claim 32 Line 1 and Line 22; compare with 5, "*...wherein the activator event includes actuation of a predetermined key of said keyboard that follows actuation of another predetermined key of said keyboard.*")

In regard to dependent claim 6, Sugimoto discloses of a keyboard that shows an apostrophe key, a vowel key, a currency key, and accented letter key and a punctuated key (Sugimoto Fig 2-7; compare with claim 6, "*...the predetermined key of said keyboard being at least one of an apostrophe key, a vowel key, a currency key, an accented letter key, and a punctuation key.*")

In regard to dependent claim 7, Sugimoto discloses of a keyboard that shows an apostrophe key, a vowel key, a currency key, and accented letter key and a punctuated key (Sugimoto Fig 2-7; compare with claim 7, "*...the other predetermined key of said keyboard being at least one of an apostrophe key, a vowel key, a currency key, an accented letter key, and a punctuation key.*")

In regard to dependent claim 8, Sugimoto discloses of s keyboard that contains both an apostrophe and vowel key. It is understood that a user can actuate these keys on the keyboard. (Sugimoto Figure 2 and 7; compare with claim 8, "*...wherein the activator event includes actuation of an apostrophe key of said keyboard that follows actuation of a vowel key of said keyboard.*")

In regard to dependent claim 9, Sugimoto shows a keyboard that contains 2 vowel keys which can be actuated by the user (Sugimoto Figure 3; compare with claim 3, "*...wherein the activator event includes actuation of two vowel keys of said keyboard in succession.*")

In regard to dependent claim 10, Sugimoto shows keyboards which all have predetermined keys that can be actuated by the user for a duration. (Sugimoto Figures 2-7; compare with claim 10, *"... wherein the activator event includes actuation of a predetermined key of said keyboard for a predetermined duration."*)

In regard to dependent claim 11, Sugimoto discloses of keyboard and it is understood that a user can actuate a predetermined or a certain duration after the actuation of the next key. (Sugimoto Figure 2-7; compare with claim 11, *"...wherein the activator event includes actuation of a predetermined key of said keyboard for a predetermined duration subsequent to actuation of another predetermined key of said keyboard."*)

In regard to dependent claim 12, Sugimoto discloses of a keyboard which includes an apostrophe key that can be actuated. (Sugimoto Figure 7; compare with claim 12, *"... the activator event including an apostrophe input."*)

In regard to dependent claim 28, Sugimoto discloses of a keyboard that has an apostrophe and a vowel and it is understood that the apostrophe can succeed that vowel; (Sugimoto Figure 2 and 7; compare with claim 28, *"...wherein the activator event includes an apostrophe that succeeds a vowel in the text input."*)

In regard to dependent claim 29, Sugimoto discloses of a keyboard the contains two vowels. It is understood that these vowels can both appear in succession. (Sugimoto Figure 2; compare with claim 29, *"...wherein the activator event includes two vowels appearing in succession in the text input."*)

In regard to dependent claim 43, Sugimoto discloses of a keyboard that can implement receiving, modifying and detecting. (Sugimoto Figures 2-7; compare with claim 43, *"...any one*

Art Unit: 2178

of said receiving means, said detecting means, and modifying means being implemented as a keyboard hook.")

In regard to dependent claim 44, Sugimoto discloses of a keyboard where and accented vowel can be inputted. (Sugimoto Figures 2-7; compare with claim 44, "*...the activator event including an accented vowel in the input text.*")

In regard to dependent claim 45, Sugimoto discloses of s keyboard where a character can be repeated. (Sugimoto Figures 2-7; compare with claim 45, "*...the activator event including a repeated character in the input text.*")

In regard to independent claim 46, claim 46 reflects the same subject matter claimed in claim 1 and is rejected along the same rationale.

In regard to dependent claim 47, claim 47 reflects a means for receiving input text including a keyboard as claimed in claim 2 and is rejected along the same rationale.

In regard to dependent claim 48, claim 48 reflects actuation of a predetermined key as claimed in claim 3 and is rejected along the same rationale.

In regard the dependent claim 49, claim 49 reflects the apostrophe key as claimed in claim 4 and rejected along the same rationale.

In regard to dependent claim 50, claim 50 reflects the predetermined key as claimed in claim 5 and rejected along the same rationale.

In regard to dependent claim 51, claim 51 reflects the keys claimed in claim 6 and is rejected along the same rationale.

In regard to dependent claim 52, claim 52 reflects the keys claimed in claim 6 and is rejected along the same rationale.

In regard to dependent claim 53, claim 53 reflects the actuation of an apostrophe and vowel key as claimed in claim 8 and is rejected along the same rationale.

In regard to dependent claim 54, claim 54 reflects the 2 vowel keys as claimed in claim 9 and is rejected along the same rationale.

In regard to dependent claim 55, claim 55 reflects the predetermined key and duration as claimed in claim 10 and is rejected along the same rationale.

In regard to dependent claim 56, claim 56 reflects the actuation of a key for a duration after the next key as claimed in claim 11 and is rejected along the same rationale.

In regard to dependent claim 57, claim 57 reflects the apostrophe key claimed in claim 12 and is rejected along the same rationale.

In regard to dependent claim 73, claim 73 reflects the apostrophe and vowel claimed in claim 28 and is rejected along the same rationale.

In regard to dependent claim 74, claim 74 reflects the 2 vowels as claimed in claim 29 and is rejected along the same rationale.

In regard to dependent claim 88, claim 88 reflects receiving, detecting and modifying as claimed in claim 43 and is rejected along the same rationale.

In regard to dependent claim 89, claim 89 reflects the accented vowel claimed in claim 44 and is rejected along the same rationale.

In regard to dependent claim 90, claim 90 reflects repeated characters claimed in claim 45 and is rejected along the same rationale.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13-27, 30-42, 58-72, and 75-87 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto US Patent No. 5,847,697 filed 6/31/1995 issued 12/8/1998 (Provided by applicant in IDS) as applied to independent claim 1, in view of Takehara et al. (herein after Takehara) EP0588538 filed 3/09/1993 issued 3/23/1994 (Provided by applicant in IDS).

In regard to dependent claim 13, Sugimoto does not specifically teach of selecting a modification of a word. However, Takehara teaches a plurality of manually operable character keys for inputting a set of characters of a language of a particular country; a manually operable conversion key for converting a character inputted by manual operation of one of the character keys into a corresponding character defined in another language of a second country. (Takehara Column 1 Lines 56-58 and Column 2 Lines 1-5; compare with claim 13, "*...said modifying means including means for selecting a modification of the word based on a rule of a language of the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting a word modification based on the language of the input text making the translation process more accurate.

In regard to dependent claim 14, Sugimoto does not specifically teach of normalizing the text. However, Takehara discloses that a user can chose transformations of input text the

Art Unit: 2178

foreign language text which will make the input text normal according to the foreign language rule. (Takehara Figures 23-26; compare with claim 14, "...*further comprising means for normalizing the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of making to text normal in order to better understand the input text.

In regard to dependent claim 15, Sugimoto does not specifically teach of detecting an activator. However, Takehara detects operation of any of the operation buttons 19 on the inner lid 2 and outputs a corresponding detection signal to a keyboard controller. (Takehara Column 8 Lines 17-19; compare with claim 15, "...*means for detecting a subsequent activator event in the input text in succession from a first detected activator event.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of detecting the event of a user making it easier to determine the correct translation of the input event.

In regard to dependent claim 16, Sugimoto does not specifically teach of detecting a subsequent activator and executing an additional modification. However, Takehara detects operation of any of the operation buttons 19 on the inner lid 2 and outputs a corresponding detection signal to a keyboard controller. (Takehara Column 8 Lines 17-19; compare with claim 16, "...*wherein detection of a subsequent activator event by said subsequent activator event detecting means.*") the last character in the input buffer 101 is changed to the character indicated by the conversion cue. (Takehara Column 12 Lines 50-52; compare with claim 16, "...*modifying means to execute an additional modification of the word in the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto,

Art Unit: 2178

providing Sugimoto the benefit of detecting the event of a user making it easier to determine the correct translation of the input event, and modifying words in the input text.

In regard to dependent claim 17, Sugimoto does not specifically teach of detecting the duration of an activator. However, Takehara detects operation of any of the operation buttons 19 on the inner lid 2 and outputs a corresponding detection signal to a keyboard controller. It is understood that the duration can be detected (Takehara Column 8 Lines 17-19; compare with claim 17, "*...means for detecting a duration of an activator event in the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of detecting the duration of the user input event which will benefit the word modification process.

In regard to dependent claim 18, Sugimoto does not specifically teach of displaying a list of available modifications of a word. However, Takehara displays a list on alternative modifications of a word. (Takehara Figure 23-27b; compare with claim 18, "*...means for displaying a list of alternative available modifications of the word.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of displaying alternate available word modification, which would give the use several choices for word modification and not just one.

In regard to dependent claim 19, Sugimoto does not specifically teach of displaying alternative word modifications. However, Takehara displays a list on alternative modifications of a word. (Takehara Figure 23-27b; compare with claim 19; compare with claim 19, "*...displaying means displaying a list of alternative available modifications of the word.*") detects operation of any of the operation buttons 19 on the inner lid 2 and outputs a

Art Unit: 2178

corresponding detection signal to a keyboard controller. It is understood that the duration can be detected (Takehara Column 8 Lines 17-19; compare with claim 19, "...*detecting means detecting an activator event.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of detecting the user input events and displaying alternate available word modification, which would give the use several choices for word modification and not just one.

In regard to dependent claim 20, Sugimoto does not specifically teach of displaying word modifications. However, Takehara displays a list on alternative modifications of a word, which can be selected (Takehara Figure 23-27b; compare with claim 20, "...*means for displaying word modification information so that a user may select a desired word modification from the displayed word modification information.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of displaying a list of word modification so the user can choose from a list of words.

In regard to dependent claim 21, Sugimoto does not specifically teach of displaying word modification information. However, Takehara discloses characters corresponding to the data inputted to the input buffer 101 are displayed on the LCD 100, the character indicated by the conversion cue as a result of the replacement of the data is displayed on the LCD 100. (Takehara Column 12 Lines 52-56; compare with claim 21, "...*displaying means displaying the word modification information in response to said detecting means detecting an activator event.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of displaying the word modification on a displaying means such as a monitor making it easier for the user the view the word modifications.

In regard to dependent claim 22, Sugimoto does not specifically teach of allowing the user to further modify the word modification. However, Takehara displays a list on alternative modifications of a word, which can be selected to modify a word (Takehara Figure 23-27b; compare with claim 22, “...means for allowing a user to further modify a word modification provided by said modifying means.”) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing a user with a modifying means to modify the words. The modifying means making it easier to modify the words.

In regard to dependent claim 23, Sugimoto does not specifically teach of allowing a user to further modify a word. However, Takehara displays a list on alternative modifications of a word, which can be selected. It is understood that a user would be the activator of the event. (Takehara Figure 23-27b; compare with claim 23, “...means for allowing a user to further modify a word modification provided by said modifying means via a subsequent activator event caused by the user.”) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing a user with a modifying means to modify the words. The modifying means making it easier for the user to modify the words.

In regard to dependent claim 24, Sugimoto does not specifically teach of characters not included in a character set. However, Takehara displays a list on alternative modifications of a word, which can be selected. The character transformation are not in the input text and are used to modify the input text. (Takehara Figure 23-27b; compare with claim 24, “...wherein characters not included in a character set of the input text are encoded using the character set

Art Unit: 2178

for the text input.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of encoding characters not provided in the character set which will be very beneficial to the modification process.

In regard to dependent claim 25, Sugimoto does not specifically teach of non-English character encoding. However, Takehara displays a list on alternative modifications of a word which can be selected. Non-English characters are encoded using the English character set. (Takehara Figure 23-27b; compare with claim 25, "*...wherein non-English characters are encoded using an English character set for the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of encoding non-English characters making the processing of choosing word modifications easier.

In regard to dependent claim 26, Sugimoto does not specifically teach of a 7-bit ASCII character set. However, Takehara discloses transformations that are based on ASCII character set. (Takehara Figure 23-28; compare with claim 26, "*...wherein characters not included in a 7-bit ASCII character set are encoded using a 7-bit ASCII character set for the text input.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of basing the character transformations on a 7-bit ASCII character set, which would be very beneficial to the modification process.

In regard to dependent claim 27, Sugimoto does not specifically teach of the detection of an activator event. However, Takehara discloses In operation, when one of the operation buttons 19 (FIG. 6) is manually operated, the key thus operated is detected by the key matrix 82, and a corresponding detection signal is inputted to the CPU 84 by way of the keyboard controller and the core chip 83. (Takehara Column 9 Lines 40-44; compare with claim 27, "*...wherein said*

Art Unit: 2178

detecting means detects an activator event based upon a context of the input text.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of detecting the user event to the context of the input event, which is very important for the modification process.

In regard to dependent claim 30, Sugimoto does not specifically teach of providing several word modifications. However, Takehara discloses that the allocation of character keys is modified. In particular, the corresponding relationship between characters and character keys is modified, for example, such that a character other than the alphabetical character a is allocated to a character key on which the alphabetical character a is indicated. (Takehara Column 1 Lines 35-40; compare with claim 30, "*...wherein said modifying means provides one of several available word modifications of the word in response to at least one or more successive activator events in an open loop.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing one of several modifications giving the user the most likely modification, which benefits the modification process.

In regard to dependent claim 31, Sugimoto does not specifically teach of providing several word modifications. However, Takehara discloses that the allocation of character keys is modified. In particular, the corresponding relationship between characters and character keys is modified, for example, such that a character other than the alphabetical character a is allocated to a character key on which the alphabetical character a is indicated. (Takehara Column 1 Lines 35-40; compare with claim 31, "*...wherein said modifying means provides one of several available word modifications of the word in response to at least one or more successive activator events in an closed loop.*") It would have been obvious to one of ordinary skill in the art to apply Takehara

Art Unit: 2178

to Sugimoto, providing Sugimoto the benefit of providing one of several modifications giving the user the most likely modification, which benefits the modification process.

In regard to dependent claim 32, Sugimoto does not specifically teach of selecting word modifications based on frequency of occurrence. However, Takehara discloses that with the modified stored contents of the input buffer, when the character conversion key 25 is manually operated for the next time, e with an umlaut will be displayed first. In this manner, the information processing apparatus can learn the circumstances of use of the operator and rearrange the characters in the order of frequency of use. (Takehara Column 12 Lines 56-62; compare with claim 32, "*...wherein said modifying means selects a modification of the word based upon a frequency of occurrence of available word modifications.*"). It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting a word modification based on frequency of word occurrence giving the user options based on input words that are used often.

In regard to dependent claim 33, Sugimoto does not specifically teach of modification means based on the grammar rules of the input text. However, Takehara discloses of an information processing apparatus by which characters can be inputted easily. Characters of another language corresponding to an alphabetical character, for example, e of the English-USA language, such as, for example, characters e with an acute accent, e with a grave accent, e with a circumflex accent and e with an umlaut of the French language, are stored in a character table ROM. When a character key for the character e is manually operated, the alphabetical character e is displayed on a display unit. Then, each time a character conversion key is manually operated, the displayed character is successively converted into the characters corresponding to

Art Unit: 2178

the character e. This indicates that modifying is based on the rules of the input text. (Takehara Abstract Lines 1-12; compare with claim 33, "*...wherein said modifying means selects a modification of the word based upon grammar rules of a language of the input text.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting modification words based on the grammar rules on the language inputted which will insure the modified words are of the same meaning of the input text.

In regard to dependent claim 34, Sugimoto does not specifically teach of selecting a modification based on a rules list. However, Takehara discloses of letters that can be selected based on the rules list for word modification. (Takehara Figures 2-7; compare with claim 34, "*...wherein said modifying means selects a modification of the word based upon a rules list for word modifications.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting a modification based on a rules lists for the modification, which will be very beneficial in the modification process.

In regard to dependent claim 35, Sugimoto does not specifically teach of a rules list comprising a fall back rule. However, Takehara discloses the control sequence advances to step S17, at which a result of the checking at step S16 is determined. In particular, it is determined whether or not there is present in another language a character which corresponds to the inputted character. When it is determined that no such corresponding character is present, the control sequence advances to step S21, at which the character inputted by manual operation of the character key 23 is additionally stored into the input buffer 101 and displayed on the LCD 100. Thereafter, the control sequence returns to step S3 to wait for next inputting of a key. (Takehara

Column 10 Lines 55-65; compare with claim 35, "...wherein said modifying means selects a modification of the word based upon a rules list for word modifications, the rules list further comprising a fall back rule for the event in which the rules list do not provide a word modification.) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing a fall back rule just in case a modification word is not provided making the process easier for the user modifications.

In regard to dependent claim 36, Sugimoto does not specifically teach of modifying a word based on a predetermined writing style. However, Takehara discloses that selecting from the special key menu and character key language setting can predetermine a writing style. (Takehara Figure 21-22; compare with claim 36, "...modifying means selecting a modification of the word based upon a predetermined writing style of the input text.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting word modification based one the predetermined input of the user which will make the modifications more accurate.

In regard to dependent claim 37, Sugimoto does not specifically teach of selecting a modification based on a previous word modification. However, Takehara discloses at step S14 to which the control sequence advances from step S12 or S13, the last character in the input buffer 101 is changed to the character indicated by the conversion cue. Then, since characters corresponding to the data inputted to the input buffer 101 are displayed on the LCD 100, the character indicated by the conversion cue as a result of the replacement of the data is displayed on the LCD 100. From step S14, the control sequence returns to step S3 to wait for next inputting of a key. (Takehara Column 10 Lines 36-45; compare with claim 37, "...modifying

means selecting a modification based upon a previous word modification selected by a user.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selected a modification based on previous inputs by the user, which will be quicker for the user modifications.

In regard to dependent claim 38, Sugimoto does not specifically teach of detecting a language foreign to the input text. However, Takehara discloses of text input in a language foreign to a language of the text input and applies a modification of the foreign language word based upon a rule of the foreign language. (Takehara Figures 21-26; compare with claim 38, "...wherein said modifying means detects a word in the text input in a language foreign to a language of the text input and applies a modification of the foreign language word based upon a rule of the foreign language.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of applying rules of the foreign language, which will insure accuracy of the modification output.

In regard to dependent claim 39, Sugimoto does not specifically teach of detecting a word in the input text in a second text context. However, Takehara discloses detects a first and second text context for modifying. (Takehara Figures 21-26; compare with claim 39, "...the input text being in a first text context wherein said modifying means detects a word in the input text in a second text context and applies a modification of the detected word according to the second context.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of selecting modifications based on the second context, which will insure more accurate modifications.

In regard to dependent claim 40, Sugimoto does not specifically teach of providing optimal accenting on an input word. However, Takehara discloses of providing accenting of word in the text input. (Takehara Figures 22-26; compare with claim 40, “...*modifying means providing optimal accenting of a word in the text input.*”) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing accenting of a word to insure that the modifications or accurate.

In regard to dependent claim 41, Sugimoto does not specifically teach of providing optimal punctuation of a word. However, Takehara discloses of punctuation of a word in text input. (Takehara Figures 22-26; compare with claim 41, “...*modifying means providing optimal punctuation of a word in the text input.*”) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing punctuation to insure accuracy of the modification.

In regard to dependent claim 42, Sugimoto does not specifically teach of providing optimal accenting and punctuation of a word. However, Takehara discloses of accenting and punctuation of a word. (Takehara Figure 22-26; compare with claim 42, “...*modifying means providing optimal accenting and punctuation of a word in the text input.*”) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing accenting and punctuation to insure the modifications are accurate.

In regard to dependent claim 58, claim 58 reflects selecting a modification of a word based on a rule of a language as claimed in claim 13 and is rejected along the same rationale.

In regard to dependent claim 59, claim 59 reflects normalization of input text as claimed in claim 14 and is rejected along the same rationale.

In regard to dependent claim 60, claim 60 reflects the detected activator event as claimed in claim 15 and is rejected along the same rationale.

In regard to dependent claim 61, claim 61 reflects the detecting and modification as claimed in claim 16 and is rejected along the same rationale.

In regard to dependent claim 62, claim 62 reflects the duration detection as claimed in claim 17 and is rejected along the same rationale.

In regard to dependent claim 63, claim 63 reflects the alternative words as claimed in claim 18 and is rejected along the same rationale.

In regard to dependent claim 64, claim 64 reflects the alternative words and detecting as claimed in claim 19 and is rejected along the same rationale.

In regard to dependent claim 65, claim 65 reflects the modification display as claimed in claim 20 and is rejected along the same rationale.

In regard to dependent claim 66, claim 66 reflects displaying word modification in response to user input as claimed in claim 21 and is rejected along the same rationale.

In regard to dependent claim 67, claim 67 reflects the word modification as claimed in claim 22 and is rejected along the same rationale.

In regard to dependent claim 68, claim 68 reflects the same subject matter claimed in claim 23 and is rejected along the same rationale.

In regard to dependent claim 69, claim 69 reflects the text being encoded as claimed in claim 24 and is rejected along the same rationale.

In regard to dependent claim 70, claim 70 reflects the non-English characters as claimed in claim 25 and are rejected along the same rationale.

In regard to dependent claim 71, claim 71 reflects the ASCII character set claimed in claim 26 and is rejected along the same rationale.

In regard to dependent claim 72, claim 72 reflects the detection claimed in claim 27 and is rejected along the same rationale.

In regard to dependent claim 75, claim 75 reflects the word modifications as claimed in claim 30 and is rejected along the same rationale.

In regard to dependent claim 76, claim 76 reflects the word modifications as claimed in claim 31 and is rejected along the same rationale.

In regard to dependent claim 77, claim 77 reflects the word modification based on frequency claimed in claim 32 and is rejected along the same rationale.

In regard to dependent claim 78, claim 78 reflects the grammar rules of a language as claimed in claim 33 and is rejected along the same rationale.

In regard to dependent claim 79, claim 79 reflects the rule list as claimed in claim 34 and is rejected along the same rationale.

In regard to dependent claim 80, claim 80 reflects similar subject matter as claimed in claim 25 and is rejected along the same rationale.

In regard to dependent claim 81, claim 81 reflects the predetermined writing style claimed in claim 36 and is rejected along the same rationale.

In regard to dependent claim 82, claim 82 reflects the modification of words as claimed in claim 37 and is rejected along the same rationale.

In regard to dependent claim 83, claim 83 reflects the rule of the foreign language as claimed in claim 38 and is rejected along the same rationale.

In regard to dependent claim 84, claim 84 reflects the same subject matter claimed in claim 39 and is rejected along the same rationale.

In regard to dependent claim 85, claim 85 reflects the accenting of a word as claimed in claim 40 and is rejected along the same rationale.

In regard to dependent claim 86, claim 86 reflects the punctuation of a word as claimed in claim 41 and is rejected along the same rationale.

In regard to dependent claim 87, claim 87 reflects accenting and punctuation as claimed in claim 42 and is rejected along the same rationale

8. **Claims 91-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto US Patent No. 5,847,697 filed 6/31/1995 issued 12/8/1998 (Provided by applicant in IDS), in view of Takehara et al. (herein after Takehara) EP0588538 filed 3/09/1993 issued 3/23/1994 (Provided by applicant in IDS).**

In regard to independent claim 91, Sugimoto teaches of a means for receiving input and detecting and apostrophe. (Sugimoto Figure 2-7; compare with claim 91, "...means for receiving input text; means for detecting an apostrophe in the input text.")

Sugimoto does not specifically teach of loops, however Takehara teaches that the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. (Takehara Column 10 Lines 31-33; compare with claim 91, "...means for initiating an input method editor loop in response to said detecting means detecting an apostrophe in the input text; and means for modifying a word in the input text based upon a word modification

Art Unit: 2178

contained in the input editor loop."). It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto providing Sugimoto the benefit of adding making it easier to detect such characters as apostrophes.

In regard to dependent claim 92, Sugimoto does not specifically teach of input text being Italian. However, Takehara discloses of input text that can be Italian (Takehara Figure 21 and 24; compare with claim 92, "*...wherein the input text is in Italian.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of inputting Italian text so the modification can compare English with Italian.

In regard to dependent claim 93, Sugimoto does not specifically teach of an editor loop. However, Takehara discloses that the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. (Takehara Column 10 Lines 31-33; compare with claim 93, "*...the input method editor loop containing a hierarchy of word modifications in a predetermined hierarchy.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing an editor loop that has a hierarchy of word modifications that the user can choose from based on the input text.

In regard to dependent claim 94, Sugimoto discloses The CHECK.sub.-- MULT routine 190 analyzes the word grouping for the current primary character (block 199) and repeats the process until the last primary character has been processed (block 200). Once completed, the CREATE.sub.-- DICT routine 189 calls the PROC.sub.-- MULT routine 193 to process any multiple entries detected in the SH.sub.-- (Sugimoto Page 37 Lines 12-19). Sugimoto discloses of a keyboard, which contains an apostrophe that can be detected. (Sugimoto Figure 7;

compare with claim 94, "...said modifying means providing successive modifications of the word upon successive apostrophes detected by said detecting means.")

In regard to dependent claim 95, Sugimoto does not specifically teach of a hierarchy of word modifications. However, Takehara discloses of although the conversion cue is shifted rightwardly by one character each time the character conversion key 25 is manually operated, if the character conversion key 25 is manually operated after the conversion cue reaches the position of the rightmost character of the list, then the conversion cue is shifted back to the position of the leftmost character of the list. Consequently, the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. If it is determined at step S12 that the conversion cue does not indicate the last character of the list, the processing at step S13 is skipped. (Takehara Column 10 Lines 23-36; compare with claim 95, "...wherein the successive modifications provided by said modifying means are implemented according to a hierarchy of word modifications in the input method editor loop.")

At step S14 to which the control sequence advances from step S12 or S13, the last character in the input buffer 101 is changed to the character indicated by the conversion cue. Then, since characters corresponding to the data inputted to the input buffer 101 are displayed on the LCD 100, the character indicated by the conversion cue as a result of the replacement of the data is displayed on the LCD 100. From step S14, the control sequence returns to step S3 to wait for next inputting of a key. (Takehara Column 10 Lines 23-45; compare with claim 95, "...wherein the successive modifications provided by said modifying means are implemented according to a hierarchy of word modifications in the input method editor loop.") It would have

Art Unit: 2178

been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing an editor loop that has a hierarchy of word modifications that the user can choose from based on the input text.

In regard to dependent claim 96, Sugimoto does not specifically teach of a closed loop. However, Takehara discloses of although the conversion cue is shifted rightwardly by one character each time the character conversion key 25 is manually operated, if the character conversion key 25 is manually operated after the conversion cue reaches the position of the rightmost character of the list, then the conversion cue is shifted back to the position of the leftmost character of the list. Consequently, the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. If it is determined at step S12 that the conversion cue does not indicate the last character of the list, the processing at step S13 is skipped. (Takehara Column 10 Lines 23-36; compare with claim 96, "*...wherein the input method editor loop is a closed loop.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of having an editor loop that is a closed loop, which will be beneficial to the modification process.

In regard to dependent claim 97, Sugimoto does not specifically teach of order determined by Italian rules. However, Takehara discloses of although the conversion cue is shifted rightwardly by one character each time the character conversion key 25 is manually operated, if the character conversion key 25 is manually operated after the conversion cue reaches the position of the rightmost character of the list, then the conversion cue is shifted back to the position of the leftmost character of the list. Consequently, the characters are arranged

Art Unit: 2178

substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. If it is determined at step S12 that the conversion cue does not indicate the last character of the list, the processing at step S13 is skipped. (Takehara Column 10 Lines 23-36). Sugimoto also discloses that the Italian language determined the order of modifications. (Takehara, Figure 22 and 24; compare with claim 97, "...wherein the input method editor loop includes a hierarchy of word modifications in an order determined by Italian language rules.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing an editor loop that has a hierarchy of word modifications that the user can choose from based on the input text and using the Italian rules to insure accuracy between the English and Italian language modifications.

In regard to dependent claim 98, Sugimoto does not specifically teach of Italian rules and frequency of word modifications. However, Takehara discloses of although the conversion cue is shifted rightwardly by one character each time the character conversion key 25 is manually operated, if the character conversion key 25 is manually operated after the conversion cue reaches the position of the rightmost character of the list, then the conversion cue is shifted back to the position of the leftmost character of the list. Consequently, the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. If it is determined at step S12 that the conversion cue does not indicate the last character of the list, the processing at step S13 is skipped. (Takehara Column 10 Lines 23-36). Sugimoto also discloses that the Italian language determined the order of modifications. (Takehara, Figure 22 and 24; compare with claim 97,

Art Unit: 2178

"...wherein the input method editor loop includes a hierarchy of word modifications in an order determined by Italian language rules and frequency of word modifications in the loop.") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of providing an editor loop that has a hierarchy of word modifications that the user can choose from based on the input text and using the Italian rules to insure accuracy between the English and Italian language modifications.

In regard to dependent claim 99, Sugimoto does not specifically teach of displaying input method editor loop. However, Takehara discloses of although the conversion cue is shifted rightwardly by one character each time the character conversion key 25 is manually operated, if the character conversion key 25 is manually operated after the conversion cue reaches the position of the rightmost character of the list, then the conversion cue is shifted back to the position of the leftmost character of the list. Consequently, the characters are arranged substantially in a loop, and accordingly, they can be selected in a circulating manner by successive manual operation of the character conversion key 25. If it is determined at step S12 that the conversion cue does not indicate the last character of the list, the processing at step S13 is skipped. (Takehara Column 10 Lines 23-36; compare with claim 99, *"...further comprising means for displaying the input method editor loop."*) It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of displaying the editor loop that will be helpful for the user in the selection of the word modifications.

In regard to dependent claim 100, Sugimoto does not specifically teach of selected an accented form of word. However, Takehara discloses of a list of option that the user may or

Art Unit: 2178

may not choose from. (Takehara 23-26; compare with claim 100, "...*modifying means modifying the word to provide an optimally accented form of the word without requiring a user to select an accented form of the word.*") It would have been obvious to one of ordinary skill in the art to apply Takehara to Sugimoto, providing Sugimoto the benefit of having the user select an accented form of the word to insure that the modifications are accurate between the two languages.

Conclusion

9. **The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.**

| | | | |
|--------|---------------------------|--------|------------|
| Matias | U.S. Patent No. 5,288,158 | issued | 02/22/1994 |
| Russo | U.S. Patent No. 5,336,002 | issued | 09/09/1994 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Londra C Burge whose telephone number is 703-305-8784. The examiner can normally be reached on 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Any response to this action should be mailed to:

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Art Unit: 2178

Or faxed to:

(703) 746-7239 (for formal communications intended for entry)

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**Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Fourth Floor (Receptionist).**

Londra C. Burge
12/15/2003



STEPHEN S. HOOG
PRIMARY EXAMINER